

*BRUSH WELLMAN, INC.*

BERYLLIUM/MINING DIVISION

TOPAZ MINING PROPERTY

Mine No. M/023/003

Annual Report for the Year 1992

RECEIVED

FEB 16 1993

STATE OF UTAH  
DEPARTMENT OF NATURAL RESOURCES  
DIVISION OF OIL, GAS AND MINING  
355 West North Temple  
3 Triad Center, Suite 350  
Salt Lake City, Utah 84180-1203  
Telephone: (801) 538-5340  
Fax: (801) 359-3940

DIVISION OF  
OIL, GAS & MINING

ANNUAL REPORT OF MINING OPERATIONS

The informational requirements of this form are based on provisions of the Mined Land Reclamation Act, Title 40-8, Utah Code Annotated 1953, as amended, and the General Rules as promulgated under the Utah Minerals Regulatory Program. An operator conducting mining operations under a Notice of Intention must file an annual operations and progress report (FORM MR-AR) with the Division.

I. GENERAL INFORMATION

1. Report Time Period: From (mo./yr.) 1/92 To (mo./yr.) 12/92
2. DOGM File Number: M/ 023/ 003
3. Mine Name: Topaz Mining Property
4. Mineral(s) Mined: Beryllium (Bertrandite)
5. Legal Description (Location of Lands Affected): "See Map A for Details"  
1/4, 1/4, Section , Township , Range  
1/4, 1/4, Section , Township , Range  
1/4, 1/4, Section , Township , Range
6. Name of Operator or Company: Brush Wellman Inc.
7. Permanent Address: P.O. Box 815  
Delta, Utah 84624

8. Company Representative (or designated operator):

Name: Greg G. Hawkins

Title: Mine Manager

Address: P.O. Box 815, Delta, Utah 84624

Phone: (801) 864-2701

☐ Please check if any of the above information has changed since previous year.

II. MINING AND RECLAMATION

1. Was the mine active during the past year? Yes ☒ No ☐
2. If active, how much ore or mineral was mined? 109,350 Wet Tons (delivered)
3. How much new or additional acreage was affected during past year? None
4. Briefly describe any new or additional surface disturbances that occurred during the past year. This description should include the type of work performed, and volume of material moved.  
-NA- All areas were previously disturbed
5. How much acreage was reclaimed during past year? (171. acres) "See Map B for Details"
6. Briefly describe the reclamation work performed during the past year. This description should include methods employed, and an evaluation of the results.
  - a) See attached "Field Report - 1992 Fall Reclamation - By: Joe Hardy"
  - b) Royalty holder claims were reclaimed to satisfy outstanding BLM Notice of Intent (See EXHIBIT 1 attached).

7. What is the total disturbed acreage at years end? (289.07 Acres) See "Table 1" for details.

8. Briefly summarize mining and reclamation planned for the upcoming year.

Mining: Ongoing production in Roadside/Fluro 3 and Section 16 North 1 pits.

Reclamation: 1) Soils testing and analysis; 2) "Test Plots" observation and analysis; 3) Reconnaissance of existed reclaimed areas. 4) Partial Bond

Release Request.

NOTE: All 1993 requirements (according to Reclamation Plan) were completed in 1992.

NOTE: Section III., "Additional Information" applies only to large mining operations.

### III. ADDITIONAL INFORMATION

1. An updated surface facilities map should be attached if there have been significant changes since the previous map was submitted. "Maps A & B"
2. Any monitoring results or other reports that are required under the terms of the approved notice of intention should be attached. "Field Report", "EXHIBIT 1" and "Annual Rainfall 1992 Report"

### IV. SIGNATURE REQUIREMENT

I hereby certify that the foregoing is true and correct.

Name (Typed or Print): Greg G. Hawkins

Title of Operator: Mine Manager

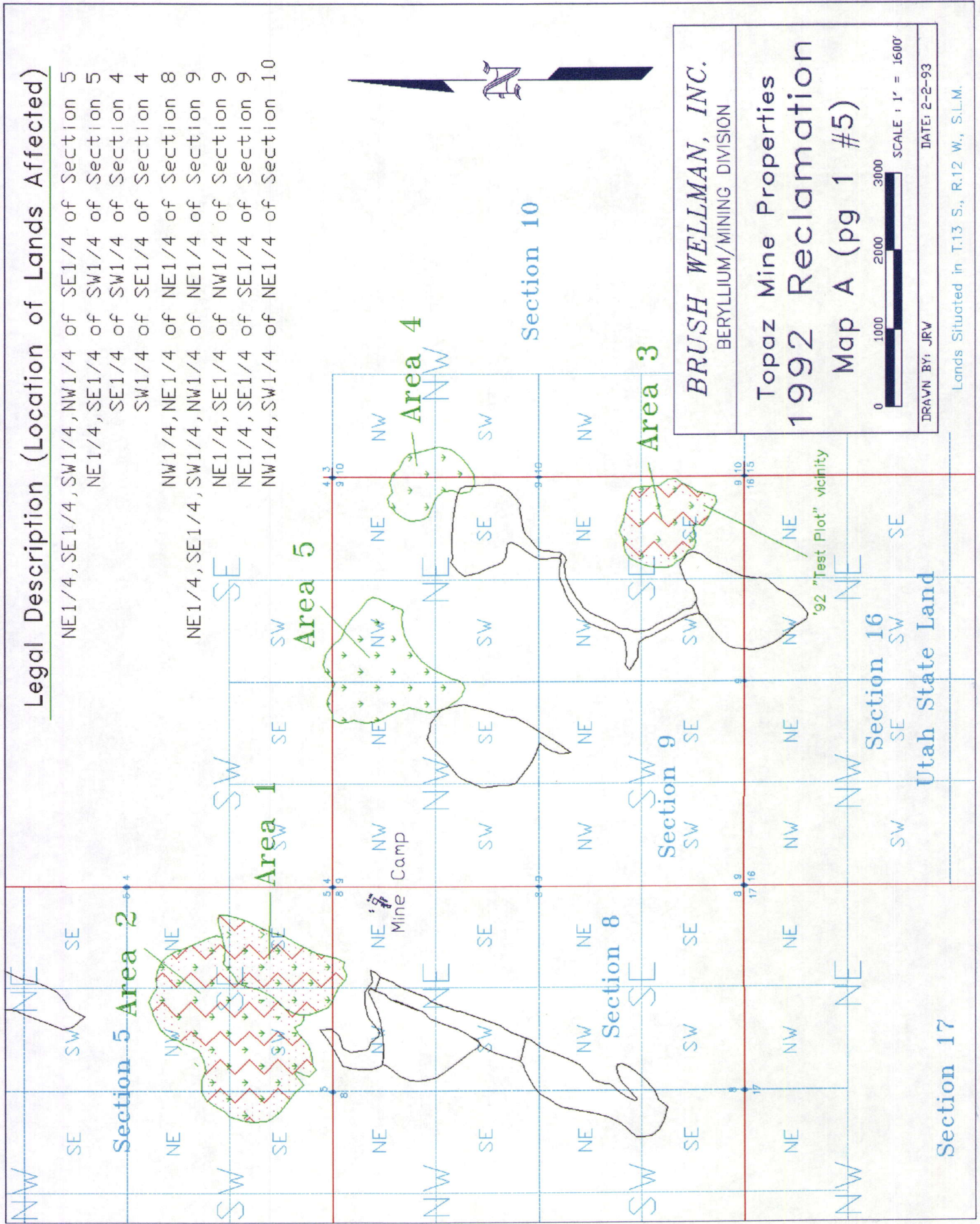
Signature of Operator: 

Date: 2-12-93

jb  
MR-AR

# Legal Description (Location of Lands Affected)

- NE1/4, SE1/4, SW1/4, NW1/4 of Section 5
- NE1/4, SE1/4 of SW1/4 of Section 5
- SE1/4 of SW1/4 of Section 4
- SW1/4 of SE1/4 of Section 4
- NW1/4, NE1/4 of NE1/4 of Section 8
- NE1/4, SE1/4, NW1/4 of NE1/4 of Section 9
- NE1/4, SE1/4 of NW1/4 of Section 9
- NE1/4, SE1/4 of SE1/4 of Section 9
- NW1/4, SW1/4 of NE1/4 of Section 10



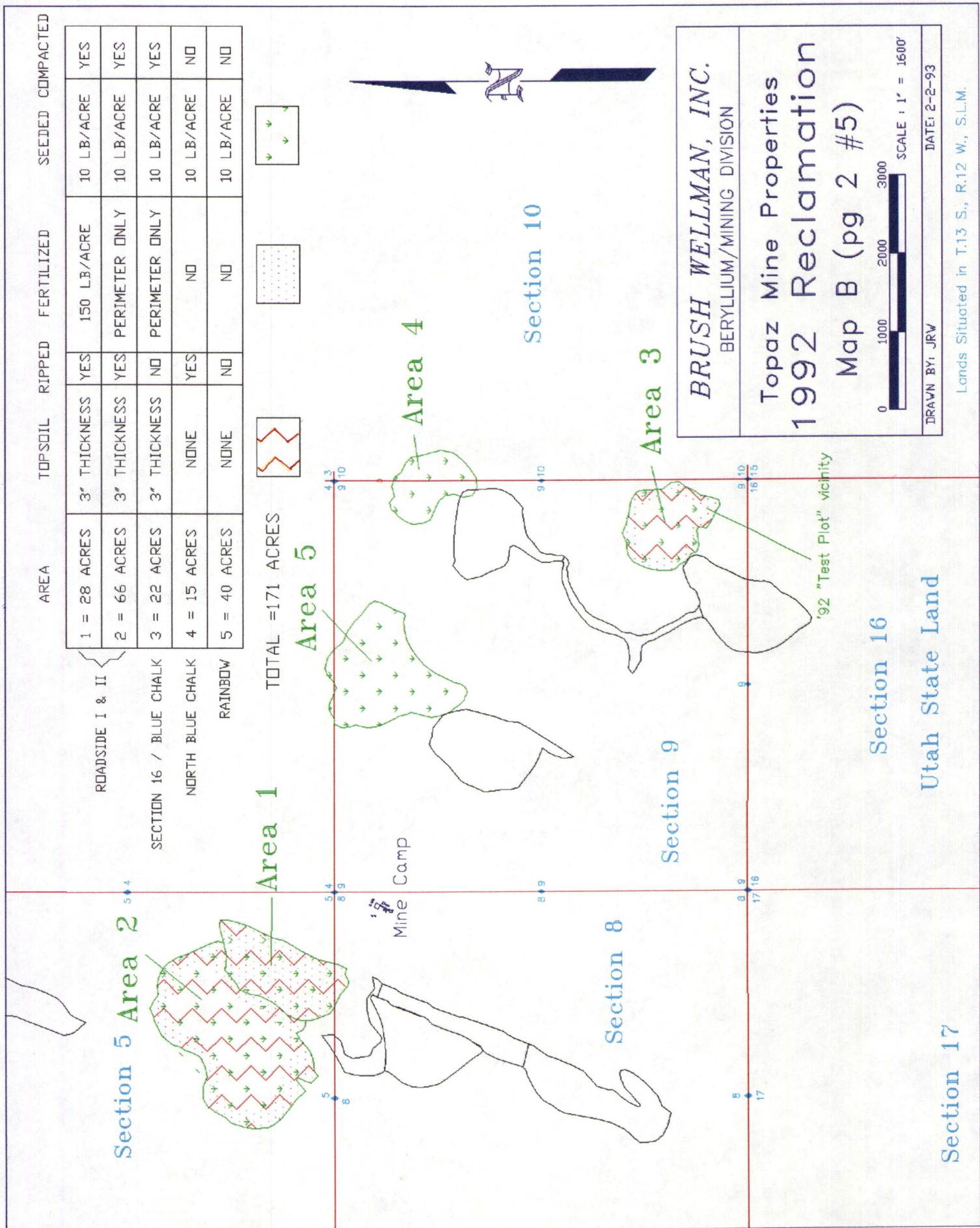
BRUSH WELLMAN, INC.  
BERYLLIUM/MINING DIVISION

Topaz Mine Properties  
1992 Reclamation  
Map A (pg 1 #5)

0 1000 2000 3000  
SCALE: 1" = 1600'

DRAWN BY: JRW DATE: 2-2-93

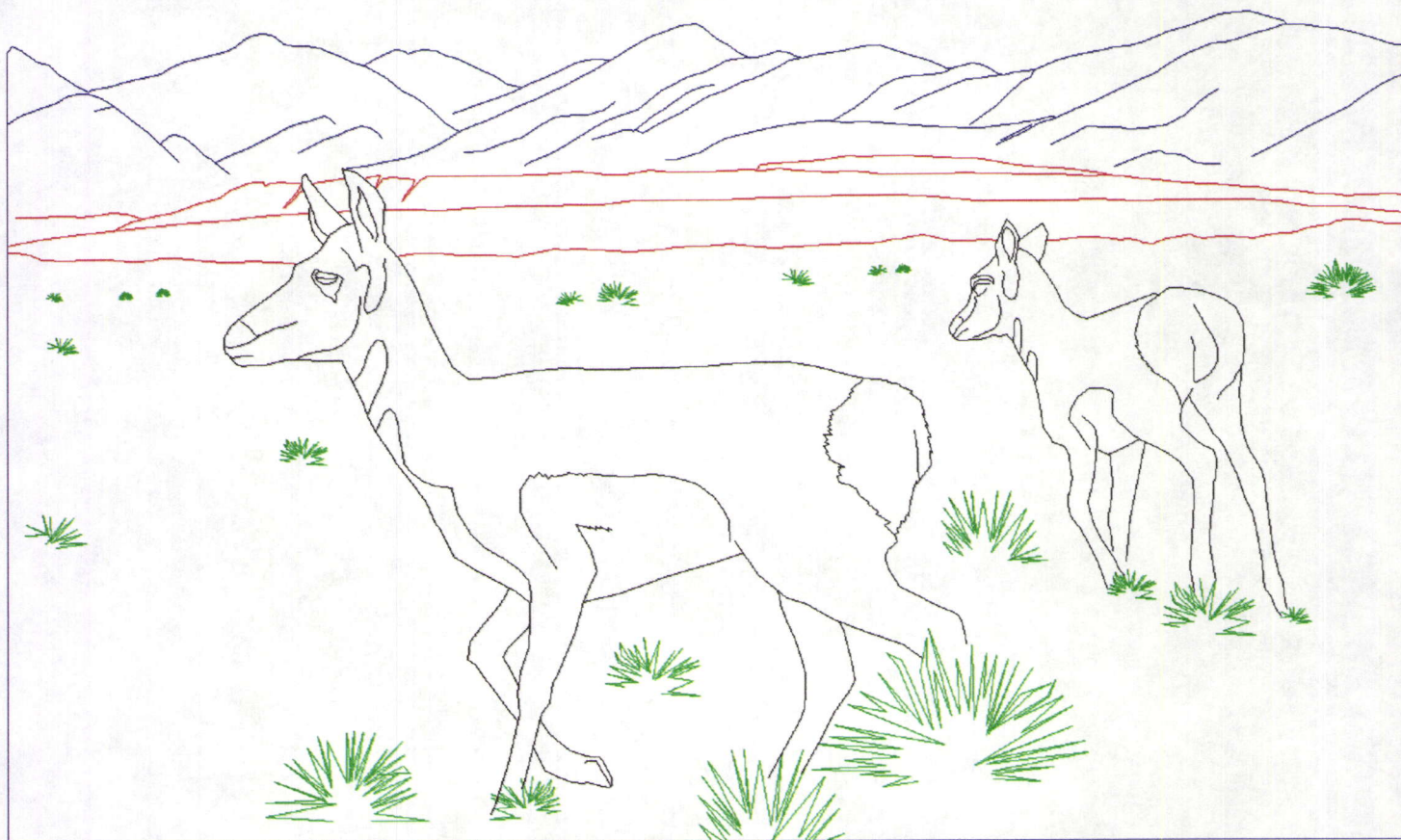
Lands Situated in T.13 S., R.12 W., S.L.M.



*BRUSH WELLMAN, INC.*

BERYLLIUM/MINING DIVISION

## Topaz Mine



## Field Report 1992 Fall Reclamation

By Joe Hardy

## BRUSH WELLMAN MINE RECLAMATION, FALL 1992

The reclamation phase of mining on the back-filled pits and dumps of Roadside 1 and 2, and the Section Sixteen North #1, North Blue Chalk and Rainbow dumps started October 1, 1992. 32,490 cubic yards of topsoil was spread on the two Roadside back-filled pits alone. In November, topsoil was also spread on the Section Sixteen/South Blue Chalk dumps with 10,230 cubic yards. This brought the final amount of topsoil spread to 42,720 cubic yards on the three dumps. The topsoil was hauled to the dump sites by means of "belly dump" scrapers from topsoil stockpiles built from the primary phase of mining, nearby the dumpsites. On the two Roadside dumps the topsoil was spread across the tops of the dumps as evenly as possible to a depth of approximately three inches. It was then ripped in with a Caterpillar dozer to mix the rhyolite and tuff mixture.

The same work was done on the Section Sixteen North #1/South Blue Chalk dumps, with the exception that the topsoil was not ripped in. The reasoning for this was when conversing with people that have done reclamation work in the past at similar sites, under similar conditions, the work had been a failure. The main reason for the failure was largely because of the high pH and salt content in the rhyolite soil mix. This had left the soil unsuitable for plant growth. Even with the addition of gypsum and phosphate fertilizers we felt the plants would get off to a better start in the top soil alone. By the time the roots reach the rhyolite and tuff layers they will be stronger and better established than those of the seedlings trying to get started.

### FERTILIZATION

In compliance with the reclamation plan revision in May of 1988, between Brush Wellman and the Department of Oil Gas and Minerals (DOGM), the fertilizers and their amounts were as follows:

Sulphur coated Urea, 39-0-0 10%S, at 128 lbs./acre  
Superphosphate, 0-48-0, at 200 lbs./acre  
Gypsum,  $\text{CaSO}_4 \cdot 2\text{H}_2\text{O}$  (20%ca), at 350 lbs./acre  
4000 lbs/acre Straw Mulch

This fertilizer mix was recommended for a total of 18 inches of topsoil. Our concern was with the 3 inches of topsoil that we were working with. This amount of fertilizer would "burn out" the plants. We contacted DOGM to get their opinion on the matter and talked with Mr. Holland Shepard, Senior Reclamation Specialist. He acknowledged that we were probably correct on our assumption. He suggested that we decrease the amount of fertilizer proportional to the total soil depth that we had. He also mentioned that we could go with a milder phosphate such as Mono-Ammonium Phosphate Sulphate 16-20-0 at an amount of 150 lbs./acre. He recommended that we not put on any gypsum or urea, because he

feared plant "burn out". The decision was made to proceed with the Mono-Ammonium Phosphate Sulfate fertilizer alone. The reasoning behind this decision was: 1. With the differences in size of the gypsum (a powder, and the Superphosphate sulfate and Urea which are both granular in form), the filtration of the gypsum to the bottom of the fertilizer cart would make an inconsistent distribution of the fertilizer.

2. Because of the extremely rough surface on the dumps, keeping the number of trips across the top of these areas with the reclamation vehicles was a high priority. The surface of the dump and stockpile area had been left very rough by the ripping and mixing process of the top soil with the rhyolite/tuff. This process had brought to the surface a lot of very large rock. For purposes of plant survival this is usually very good, but it can be destructive to the vehicles that go over this terrain.

The fertilizer was purchased and fertilizer cart rented from the Intermountain Farmers Inc. in Delta, Utah. The fertilizer came to a total of 8150 pounds.

Nothing at the mine has "power takeoff" to run the fertilizer spreader, so a contractor from Delta was employed to spread it for us.

The problem with the fertilization process was mainly the soft soil condition left from ripping the topsoil in with the tuff/rhyolite mix. Because of this condition, the weight of the fertilizer and the size of the tractor (even though it was a four wheel drive), there was a problem with the tractor "spinning out" in Area #1 East Roadside dump. We ended up pulling the tractor and cart in tandem with the 140G roadgrader until the weight of the fertilizer was reduced enough for the tractor to pull the cart by itself.

The fertilizer was distributed over East Roadside, Section Sixteen North #1/South Blue Chalk and a portion of West Roadside/Fluro. Brush Wellman was only obligated to spread the fertilizer on the East Roadside pit back-filled areas, (as agreed upon by DOGM and Brush Wellman earlier). In an attempt to realize the best possible chance of getting a successful seed bed, the remaining fertilizer was spread on the remaining topsoiled areas. Both Areas #1 (East Roadside Dump) and Area #3 (Section 16 North #1 Dump) were completely fertilized. Also a portion of Area #2 (West Roadside Fluro) was fertilized around the perimeter of the dump. All of the fertilizer was spread at a rate of 150 lbs./acre as was agreed upon.

## RESEEDING

Brush Wellman considered many options before deciding upon the best application method for the above mentioned areas. The focus was on the extremely rough terrain. We were not only concerned about the wear and tear on the vehicles and equipment, but also for the welfare of the people running the equipment. The idea to spread all five varieties of seed on simultaneously and uniform in distribution was our intent.

Another objective was to spread the seed as evenly and as closely as possible to the amount that was specified in the contract. The problem was with the Green Rabbitbrush seed, which is very light and feathery. Along with it came a lot of stems and inflorescence and bi-product. This seed would certainly plug any of the drill type seed spreaders being considered.

While researching the many possible modes of application of the seed, the possibility of blowing the seed on was studied. Since the Rabbitbrush seed was fairly consistent with that of insulation, we contacted an "insulation blower" contractor in the Delta area. He was invited to come and try his machine out on the seed. It turned out that his machine worked very well. It had the ability to spread the five varieties of seed at the same time. The churning paddles in the bin kept the seed mixed, which also kept the smaller seed from settling to the bottom. It spread the seed evenly and we never had a clogging problem. It was as if it was made for this very purpose. The owner of the insulation blower also submitted the lowest bid when compared to conventional seed drilling types, this helped in making our decision on who to contract for the seeding part of the reclamation. There was also the fact that he was a local businessman and we prefer to keep our business dealings local if at all possible. This was the mode of seed application for all the sites mentioned.

## COMPACTION AND THREE INCH SOIL DEPTH

The reasons for the three inch soil depth and use of the sheepsfoot for compaction came from many sources. A study plot which was set up in the fall of 1991 on the Section Sixteen North #1/South Blue Chalk dump was the primary reason. The study was for topsoil depth and it's influence on plant success in our region of Utah.

Topsoil was distributed as four distinct soil depths of 0, 3, 8 and 16 inches. Eight varieties of wild land seed were distributed on these test plots, including the five varieties that were planted in this years reclamation. These species included:

<u>COMMON NAME</u>	<u>SCIENTIFIC NAME</u>	<u>LBS/ACRE</u>
* Green Rabbit Brush	Chrysothamnus nauseosus	3.0
* Shadscale	Atriplex confertifolia	2.0
* Fourwing Saltbrush	Atriplex canescens	2.0
Brigham Tea	Ephedra nevadensis	1.0
* Yellow Sweetclover	Melilotus officinalis	1.0
Palmer's Penstemon	Penstemon palmeri	1.0
Squirreltail grass	Sitanion hystrix	2.0
* Indian ricegrass	Oryzopsis hymenoides	2.0

\* *Plants used in this years reclamation*

In the spring all the plots studied displayed a moderate success. The seedlings germinated well, especially the grasses. But as the summer rolled on (with it's long dry spells with little or no rain), most of the plants died. Only the heartiest and most suitably adapted of the plant species made it through the summer of 1992.

In the late summer, an analysis of the test plots was conducted to learn anything from the plants that had survived this test. There was some amazing results we had problems understanding. The study plot with the three inches of topsoil had by far the best results. A conclusion was reached that the thinner amount of topsoil cover over the hard

rhyolite/tuff layer held the moisture available where the young plant roots could reach it. It was also discovered that many of the plants that were still alive were found in the tracks left from the Caterpillar Dozer that was used for ripping and covering the seed. The reason was assumed to be that the moisture was puddling in these areas. W.R.R. of Salt Lake City, a business that specializes in reclamation work, commented that compaction was the secret to their successful reclamation plans and plants just did better in compacted soil. Glenn Peele, from Ephrium Utah (another reclamation contractor) seconded W.R.R.'s opinion. They recommended that we use the sheepsfoot in our work.

### RECLAMATION WORK ON AREAS WITHOUT TOPSOIL

Both North Blue Chalk and Rainbow dumps were not topsoiled. It was agreed upon by Brush Wellman and DOGM that these two dumps would not need to be topsoiled. Both had been reseeded and both were failures, except in the drainage areas where rain water collected.

Both of these areas have primarily a rhyolite and some tuff mixture on the surface.

North Blue Chalk had the four designated varieties of seed plus the Shadscale seed blown on. The area was lightly ripped with a dozer, paying careful attention not to disturb the existing plants growing from the last reclamation work. The sheepsfoot was not used in this area. The action of the Caterpillar ripping the soil in, it was felt would compact the soil enough.

The Rainbow dump had also been reseeded before. The area had been ripped after the reseeded and this left the surface rougher than any of the others. The plan was to apply the seed on by plane. After repeated attempts, the Rabbitbrush seed would not drop out of the shoot. So this plan was abandoned.

The area was so rough and rocky, the only suitable way to reseed was to blow it on. To save the contractors damage to their vehicles the mining crew prepared the way for them with a dozer.

With help from an easterly breeze the paths were made 50-60 feet apart by the dozer. The seed was blown on just the way the other areas had been seeded. After the seed was distributed on the Rainbow dump the whole area was lightly ripped with a dozer. The sheepsfoot was not used on this area, for the sake of keeping it in one piece. The other areas had been rough on this piece of equipment. This area certainly would have ruined it.

## GOALS TO LOOK FOR IN FUTURE RECLAMATION WORK

1. Get the contractors to bring their various reclamation machines out to the reclamation site to get a better idea of the type of job they will do.
2. Take a look at compacting before spreading the seed and fertilizer, then dragging the area with some chain link fencing.
3. Talk to DOGM about substituting the Rabbitbrush seed variety with another more versatile, useful plant variety. One that not only will be good for ground cover, but also be good for grazing and wildlife usage. This plant will have to be suited for this area, it's soils, and it's long periods of dry, hot weather.
4. Get better acquainted with the areas where the reclamation will be done. Know the exact amount of acreage, and have the soil tested that will be used for the seedbed. Get some professional recommendations for optimum success for our money.
5. Learn from our mistakes. Give ourselves enough time and plan with the timetable of the mining crew. From the test plots we have planned for this fall, we hope to learn what is the best suited for our conditions at the Brush Wellman mine site.
6. We are planning a study plot with four variations of fertilizers, with and without mulching and different application methods. We'll try to learn from these tests.
7. Soil samples from dry areas will be analyzed to compare to dump mixtures.

## CONCLUSION

Overall, 171 acres were reclaimed during October and November of 1992 for an total cost of \$155,000. 116 acres were newly reclaimed in Roadside 1&2 and Section 16 areas. 55 acres were redone a second time in which we will apply for final variance. Please see Maps and Photos attached in the appendix for further details. If there are any questions please contact Joe Hardy or Greg Hawkins at the Brush Wellman Mill.

## SPREADING TOPSOIL



# FERTILIZATION



## RESEEDING



## COMPACTION



# AERIAL PHOTO OF RECLAMATION WORK



# AERIAL PHOTO OF RECLAMATION WORK





# EXHIBIT 1

## United States Department of the Interior

### BUREAU OF LAND MANAGEMENT HOUSE RANGE RESOURCE AREA

15 East 500 North  
P.O. Box 778  
Fillmore, Utah 84631

TAKE  
PRIDE IN  
AMERICA

IN REPLY REFER TO:  
3809  
UT054  
UT-056-51N

September 4, 1991

CERTIFIED MAIL #P 866 721 703

W. H. Peterson  
P. O. Box 55  
Hinckley, UT 84635

Dear Mr. Peterson:

On August 16, 1991 a field compliance inspection was conducted at the site referenced by your mining notice, UT-056-51N dated August 22, 1986. There was no recent mining related activity observed on these claims located in T. 12 S., R. 13 W., Section 13.

If you are still actively operating under your previous notice, you are requested to update your activity with this office immediately. Please provide a new notice, with a map indicating the following information:

1. Location of exploratory and other mining related activity for which you are responsible.
2. Location of your completed reclamation.

You are reminded that if operations continue for more than one year, the Bureau of Land Management must be re-notified on the anniversary of your notice.

If your activity has been suspended indefinitely, the disturbed areas must be reclaimed. Please contact this office for guidance on reclamation techniques.

Please be aware that if an operator and/or claimant fails to comply with the Federal regulations contained in 43 CFR 3809, a Notice of Noncompliance will be issued, followed by appropriate remedial action.

If you have any questions regarding this matter, please feel free to contact Rody Cox or me at (801) 743-6811.

Sincerely,

*Rex Rowley*  
Rex Rowley  
Area Manager

**BRUSHWELLMAN**  
ENGINEERED MATERIALS

Brush Wellman Inc.  
P.O. Box 815  
Delta, Utah 84624  
Phone 801/864-2701

June 8, 1992

Bureau of Land Management  
House Range  
Attention: Rex Rowley/Rody Cox  
15 East 500 North  
P.O. Box 778  
Fillmore, Utah 84631

Ref. 3809/UT054  
3800/UT054  
UT-056-51N

Gentlemen:

Late last fall Mr. W.H. Peterson passed on a copy of your September 4th, 1992, memo referring to field compliance (August 16, 1992) site inspection. After reviewing the memo I called the BLM and was referred to Rody Cox from your office.

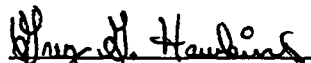
We agreed that since Brush Wellman has a Royalty Lease Agreement with Mr. Peterson that Brush Wellman would reclaim the area of concern during the spring of 1992. We also agreed that if any future activities were planned for this property that Brush would file a new notice of intent.

Rody Cox and I discussed appropriate reclamation required. During March 1992, Brush Wellman's Joe Hardy, walked the area and identified all disturbance do to past drilling and exploration activities. On May 12, 1992, Joe completed all reclamation work for the Wes Claim group as per his memo attached.

Since his work is complete, your inspection of the site can now be made.

Please let us know if you have any further concerns regarding this reclamation request. I would also appreciate your notifying Mr. Peterson with a copy to Brush Wellman as to the results of the BLM's final inspection of compliance, once completed.

Sincerely,

  
Greg G. Hawkins  
Mine Manager

GH/ld

cc: D. McMillan  
D. Perry  
Wes H. Peterson  
J. Wagner

May 29, 1992

TO: GREG HAWKINS

FROM: JOE HARDY JH

SUBJECT: RECLAMATION OF COMEBACK DRILLHOLES ON THE WES CLAIMS  
(Wes Peterson Property)

The project started March 16, 1992. Drillholes were identified by map work done earlier. All known drillhole locations were found and marked as already reclaimed or unreclaimed and the specific reclamation work needing to be done. A few sites had already been reclaimed and needed no reclamation work done and some others needed only plot preparation and seeding.

However, the main thrust of the operation needed all reclamation work. This included filling in the holes up to approximately five feet from the surface with drill cuttings from the actual drilling. The top five feet was filled with posthole cement to the surface, forming a plug. Each hole was identified with an aluminum tag engraved with a C.B. (for Comeback) and the drillhole number, cemented and nailed on top of the cement plug.

The actual process of planting was done by ground preparation (breaking up the surface soil) scattering of the special mix of seed prepared beforehand and then working the seed in the soil. All of the above mentioned planting was done with shovel and rake. The seed mixture consisted of: *Agropyron crutatum*, *Melilotus officinalis*, *Sitanion hystrix*, *Oryzopsis hymenoides*, *Sporabolus cryptandrus*, *Penstemon palmeri*, *Atriplex canescens*, *Ceretoides lanata*, and *Chrysothamnus viscidiflorus*.

This project was completed May 12, 1992. All areas have been reclaimed according to State and Federal guidelines.

JH/dw

cc: G. Hawkins  
J. Wagner

3809  
UT-056-11N  
UT-056-30N  
UT-056-51N  
UT054

July 2, 1992

CERTIFIED MAIL RRR #P 864 943 094

Wesley Peterson  
P. O. Box 55  
Hinckley, UT 84635

Dear Mr. Peterson:

On June 19, 1992, a field compliance inspection was conducted on your mining notices, UT-056-11N, UT-056-30N, and UT-056-51N, which includes claims, Comeback and Comeback 1-7 (UMC 280788-95), in T. 12 S., R. 13 W., Section 13. These notices were accepted by our office on August 4, 1981, June 22, 1983 and August 22, 1986 respectively, under the 43 CFR 3809 regulations for surface management. Based on this inspection, we have determined the surface disturbance related to your mining operations has been satisfactorily reclaimed. Therefore, this notice case file is closed.

If you restart any mining related activity that causes surface disturbance, then you must re-notify this office at least 15 days prior to the start up of your operations.

Thank you for submitting your notice and for your support in proper management of public lands.

Sincerely,

Rex Rowley  
Area Manager

cc: D. Wayne Hedberg, UDOGM

C. L. Everson  
P.O. Box 1333  
Lubbock, TX 79408

John Wagner  
Brush Wellman  
P.O. Box 815  
Delta, UT 84624

RC:msc

TABLE 1  
DISTURBED ACREAGE  
TOPAZ MINING PROPERTY

Pit Complexes	PITS		DUMPS			Reclaimed to MRP Pits/Dumps
	Existing	Change	Existing	Change		
Roadside 1 & 2	17.46 *	-28.00 R	0.00 0.00	-66.00 R	Tuff Rhyolite	Backfilling in progress / Area 1 & 2 exceeds MRP
Blue Chalk North	20.64 *	None	4.04 V 0.00	-15.00 R	Tuff Rhyolite	No / Yes (Ripped and Reseeded again) / Variance requested
Blue Chalk South	6.53 *	None	0.00 46.26 *	None None	Tuff Rhyolite	No (mostly backfilled) / Yes (but needs reseeding again)
Fluro	23.89 *	None	69.16 V 0.00	None None	Tuff Rhyolite	No / Yes Active / Variance
Sigma Emma	24.19 V	None	16.79 V 0.00	None None	Tuff Rhyolite	COMPLETED
Taurus	12.72 V	None	0.00 0.00	None None	Tuff Rhyolite	COMPLETED
Rainbow	26.20 *	None	0.00 18.07 *	None -40.00	Tuff Rhyolite	No / Yes (40 acres reseeded again) / Variance requested
Roadside/Fluro 3	20.13 *	None	0.00 12.15 *	None None	Tuff Rhyolite	No / Yes (backfill over RS1/RS2 pits and dumps)
Section 16 North #1	26.34 *	None	0.00 62.06 *	None -22.00 R	Tuff Rhyolite	No / Yes (Topsoil and reseeded)
Monitor (Anaconda)	8.82 V	None	26.23 V 0.00	None None	Tuff Rhyolite	Yes / Yes
Totals (Pits & Dumps)	186.92	-28.00	116.22 138.54 254.76	-81.00 -62.00 -143.00	Tuff Rhyolite Both	

**SUMMARY**

Existing Acres	Total Disturbed		Variance (V)	Reclaimed (R)		* Existing MRP Balances
Pits	186.92	Acres	-45.73	-28.00	=	113.19 Acres
Tuff Dumps	116.22	Acres	-116.22	-81.00	=	0.00 Acres
Rhyolite Dumps	200.54	Acres	0.00	-62.00	=	138.54 Acres
Misc. (Roads, Etc.)	37.34	Acres	0.00	0.00	=	37.34 Acres
<b>TOTAL DISTURBED</b>	<b>541.02</b>	<b>Acres</b>	<b>-234.18</b>	<b>-171.00</b>	<b>=</b>	<b>289.07 Acres</b>

Note: Of 19.04 acres with Variance on North Blue Chalk tuff dump, 15 acres were reclaimed.

# BRUSHWELLMAN

Engineered Materials

February 12, 1993

TO: GREG HAWKINS

FROM: JOHN WAGNER

SUBJECT: ANNUAL RAINFALL FOR THE 1992 RAIN YEAR

Attached is a graph plotting the rainfall received during the 1991 rain year. The new rain year begins on October 1 of each new year. The data was supplied by the Fillmore BLM Office, Rex Rowley/Paul Briggs. The following summarizes the plotted graph:

On October 7, 1992 the rain gauge was recharged.

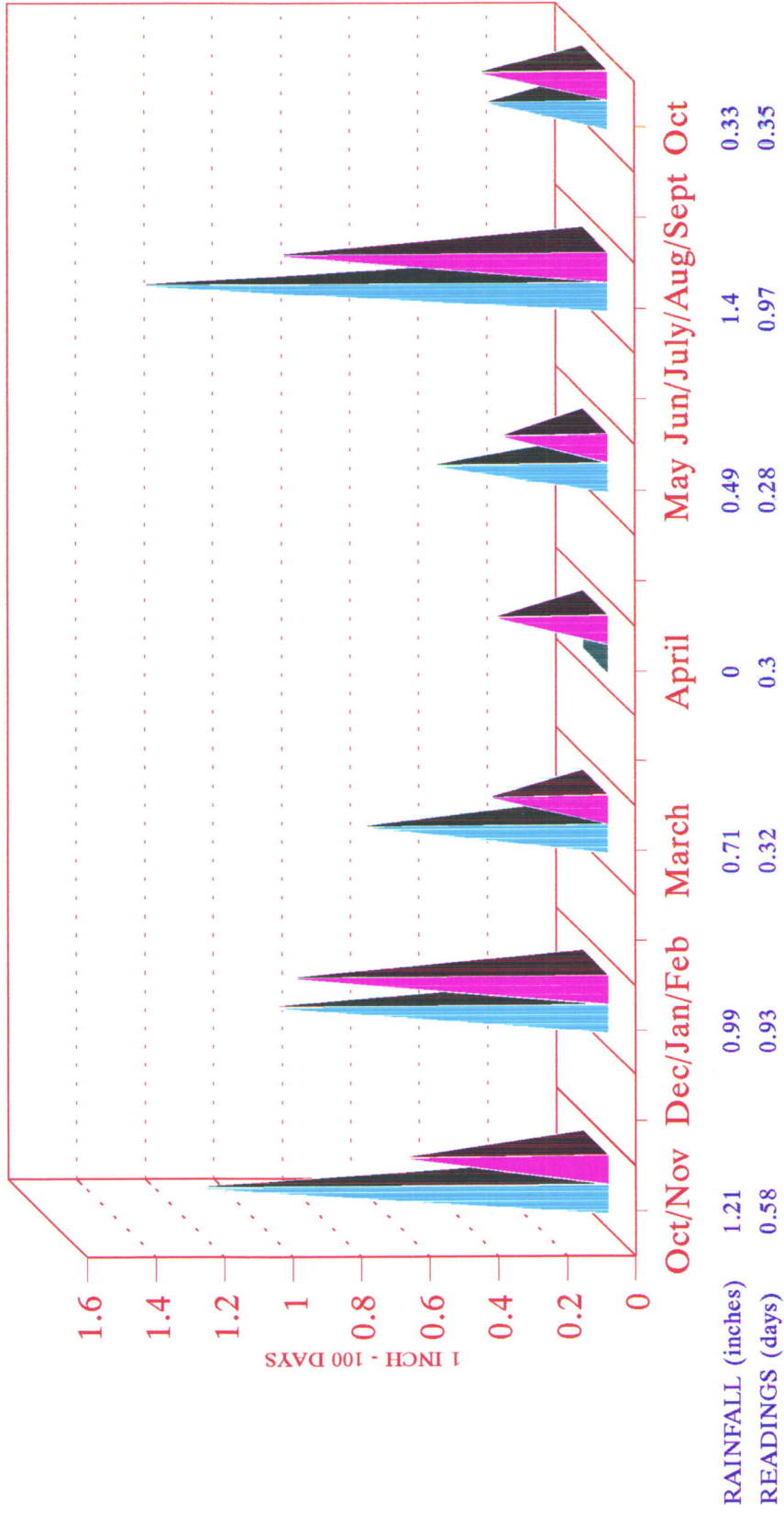
READING DATE	PRECIPITATION MEASURED IN INCHES	NUMBER OF DAYS BETWEEN READINGS
Nov. 27, 1991	1.21	58
Feb. 28, 1992	.99	93
March 31, 1992	.71	32
April 30, 1992	0	30
May 28, 1992	.49	28
Sept. 2, 1992	1.4	97
Oct. 7, 1992	.33	35
TOTALS	5.13	373

JRW/dw  
Attachment

cc: Joe Hardy  
Rex Rowley/Paul Briggs - BLM  
File

# EFFECTIVE MOISTURE TOPAZ MT.

1992



# Effective Moisture for Topaz Mt.

## Measured Rainfall

	1978	1979	1980	1981	1982	1983	1984	1985	1986	1987	1988	1989	1990	1991	1992
October			2.20			1.21	0.55				0.94	0.49	1.00		0.33
November		2.53						1.21		0.71		0.38	1.43	0.60	1.21
December				0.55	2.53										
January		0.66	1.70						0.77			0.33		0.55	
February		0.61		1.10	3.36	3.30			0.44	1.60	2.31		0.38		0.99
March			1.90					1.10		0.72	0.50	0.82	0.38	1.15	0.71
April	1.50	1.76	1.98		0.55	1.65	4.46		2.86	0.22	0.60	0.00	1.43	0.96	0
May	0.66	0.22		2.75	0.55	1.10		0.99		1.38	1.10	0.99	1.37	0.71	0.49
June		0.39	2.26	1.32	1.72	1.32	1.93			0.28	0.39				
July					1.38							0.77			
August						3.08	3.41				0.39	0.93	0.60		
September	0.28			2.20	4.24		0.50			1.70	0.55	0.22	0.94	2.75	1.40
<b>Total</b>	<b>2.44</b>	<b>6.17</b>	<b>10.04</b>	<b>7.92</b>	<b>14.33</b>	<b>11.66</b>	<b>10.85</b>	<b>3.30</b>	<b>4.07</b>	<b>6.61</b>	<b>6.78</b>	<b>4.93</b>	<b>7.53</b>	<b>6.72</b>	<b>5.13</b>
<b>Yrly Avg.</b>	<b>0.81</b>	<b>1.03</b>	<b>2.01</b>	<b>1.58</b>	<b>2.05</b>	<b>1.94</b>	<b>2.17</b>	<b>1.10</b>	<b>1.36</b>	<b>0.94</b>	<b>0.85</b>	<b>0.55</b>	<b>0.94</b>	<b>1.12</b>	<b>0.73</b>
<b>Minimum</b>	<b>0.28</b>	<b>0.22</b>	<b>1.70</b>	<b>0.55</b>	<b>0.55</b>	<b>1.10</b>	<b>0.50</b>	<b>0.99</b>	<b>0.44</b>	<b>0.22</b>	<b>0.39</b>	<b>0.00</b>	<b>0.38</b>	<b>0.55</b>	<b>0.00</b>
<b>Maximum</b>	<b>1.50</b>	<b>2.53</b>	<b>2.26</b>	<b>2.75</b>	<b>4.24</b>	<b>3.30</b>	<b>4.46</b>	<b>1.21</b>	<b>2.86</b>	<b>1.70</b>	<b>2.31</b>	<b>0.99</b>	<b>1.43</b>	<b>2.75</b>	<b>1.40</b>

Note: All measurements are in inches.

This page is a reference page used to track documents internally for the Division of Oil, Gas and Mining

Mine Permit Number M0230003 Mine Name Topaz Mining Property  
Operator Bruh Wellman Date February 16, 1993  
TO \_\_\_\_\_ FROM \_\_\_\_\_

☐ CONFIDENTIAL ☐ BOND CLOSURE ☐ LARGE MAPS ☐ EXPANDABLE  
☐ MULTIPUL DOCUMENT TRACKING SHEET ☐ NEW APPROVED NOI  
☐ AMENDMENT ☐ OTHER \_\_\_\_\_

Description YEAR-Record Number

☐ NOI ☐ Incoming ☐ Outgoing ☐ Internal ☐ Superceded

1992 Annual Report

☐ NOI ☐ Incoming ☐ Outgoing ☐ Internal ☐ Superceded

☐ NOI ☐ Incoming ☐ Outgoing ☐ Internal ☐ Superceded

☐ NOI ☐ Incoming ☐ Outgoing ☐ Internal ☐ Superceded

☐ TEXT/ 8 1/2 X 11 MAP PAGES ☐ 11 X 17 MAPS ☐ LARGE MAP

COMMENTS: \_\_\_\_\_

CC: \_\_\_\_\_